



UN-GGIM Subcommittee on Geodesy and the FIG

Dr. Daniel R. Roman

Chair for WG on Education, Training and Capacity Building

Chair for FIG Commission 5, Positioning and Measurement

Definitions

- What is Governance?
 - Government. (Merriam-Webster)
 - Comprises all of the processes of governing – whether undertaken by the government of a state, by a market or by a network – over a social system (family, tribe, formal or informal organization, a territory or across territories) and whether through the laws, norms, power or language of an organized society. (Wikipedia)
- What is an InterGovernmental Organization (IGO)?
 - An intergovernmental organization (IGO) is an organization composed primarily of sovereign states (referred to as member states), or of other intergovernmental organizations. IGOs are an important aspect of public international law. IGOs are established by a treaty that acts as a charter creating the group. Treaties are formed when lawful representatives (governments) of several states go through a ratification process, providing the IGO with an international legal personality. (Wikipedia)

What does UN-GGIM do as an IGO?

Frameworks, guides, norms, standards and methodological development

Normative strengthening, capacity building and implementation of GGIM in support of the 2030 Agenda



-  Strengthening global geospatial information management
-  Contribution of regional committees, thematic groups and networks
-  Legal and policy frameworks and issues related to authoritative data
-  Trends in national institutional arrangements
-  Adoption of standards and technical specifications
-  Strengthening collaboration with UNGEIN
-  United Nations activities in geospatial information management
-  Secretariat programme management

UN-GGIM: Strengthening the Global Data Ecosystem

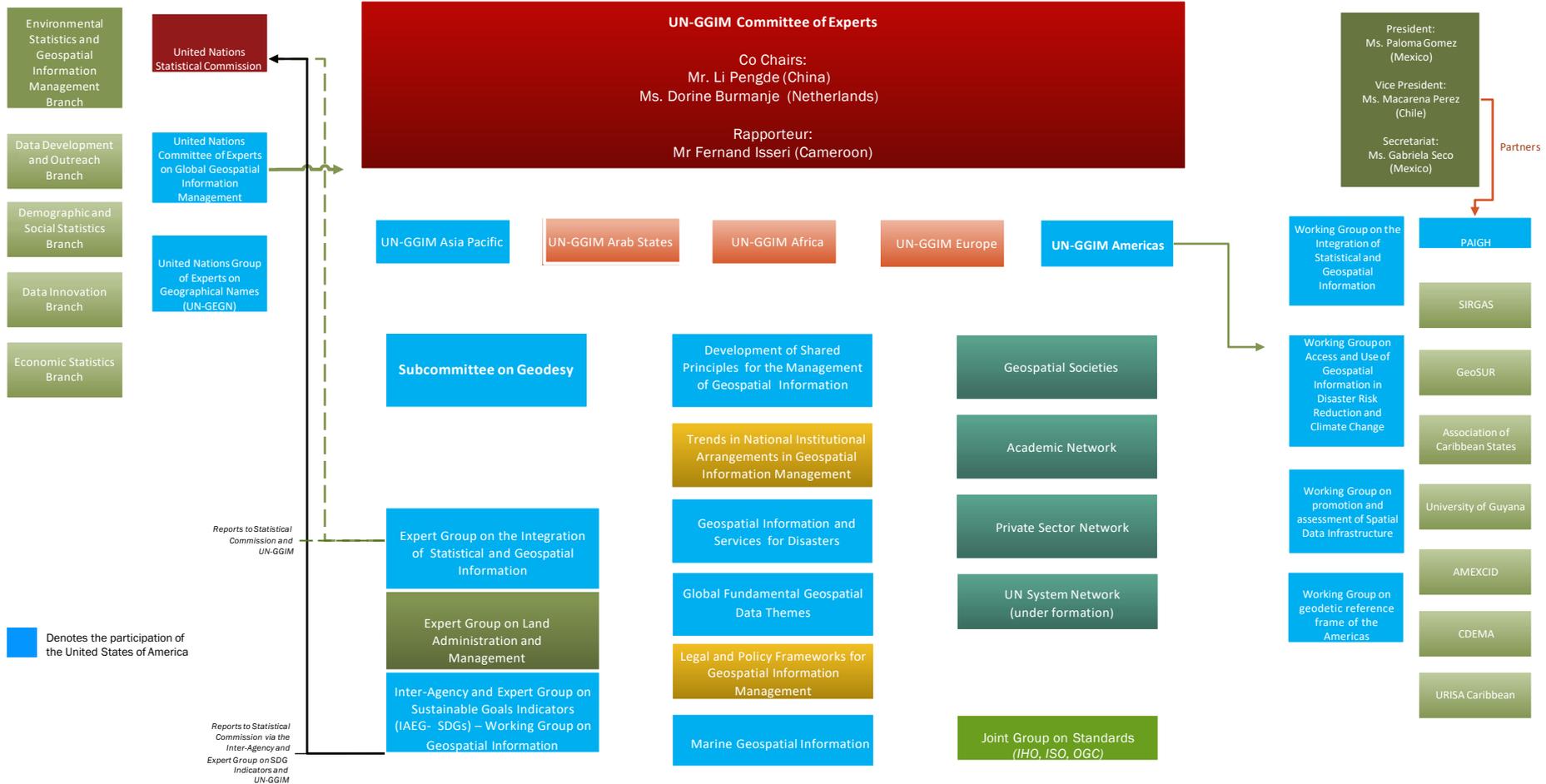


The activities and efforts that contribute to the unique local-to-global value of UN-GGIM for Member States

-  Global geodetic reference frame
-  Global fundamental geospatial data themes
-  Integration of geospatial, statistical and other information
-  Geospatial information and services for disasters
-  Land administration and management
-  Geospatial information for sustainable development
-  National geospatial data and information systems
-  Marine geospatial information



United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) Structure



SubCommittee on Geodesy (UN SCoG)

- EG on Land Administration and Management
- EG on the Integration of Statistical and Geospatial Information
- WG on Development of a Statement of Shared Principles for the Management of Geospatial Information
- WG on Trends in National Institutional Arrangements in Geospatial Information Management
- WG on Geospatial Information and Services for Disasters
- WG on Global Fundamental Geospatial Data Themes
- WG on Legal and Policy Frameworks for Geospatial Information Management
- WG on Marine Geospatial Information

United Nations

Department of Economic and Social Affairs (ECOSOC)

Statistics Division

United Nations Global Geospatial Information Management (UN-GGIM)

| | | | | |
|----------------------|------------------|---------------------|----------------|----------------|
| UN-GGIM Asia-Pacific | UN-GGIM Americas | UN-GGIM Arab States | UN-GGIM Europe | UN-GGIM Africa |
|----------------------|------------------|---------------------|----------------|----------------|

- **UN-GGIM adopted the GGRF – that is, all Nations have agreed to use a common reference frame based on the ITRS.**
- **The UN-SCoG is tasked with implementing the GGRF globally.**
- **That agreement and the obligation to adopt the GGRF was also passed through to the Regional Committees (RCs).**

What is the UN Global Geodetic Reference Frame (GGRF)?

- Conceptually, the GGRF encompasses all aspects of a modernized reference frame including the geodetic infrastructure (GI), Education Training and Capacity Building (ETCB), Governance (GOV), Outreach and Communication (OC) as well as Standards (PSC).
- Includes both International Terrestrial Reference System (ITRS) and the International Height Reference System (IHRF)
 - The ITRS focuses on a framework for GNSS applications in an ellipsoidal framework
 - The IHRF focuses on a framework for physical heights (i.e., leveling, heights above “MSL”)
- Both the ITRS and the IHRF are determined and maintained by the International Association of Geodesy (IAG)
 - The ITRS is very robust and mature
 - The IHRF is nascent but growing
- The UN SCoG was tasked with developing a Roadmap and implementation plan to put the GGRF in place.

GGRF road map key issue categories

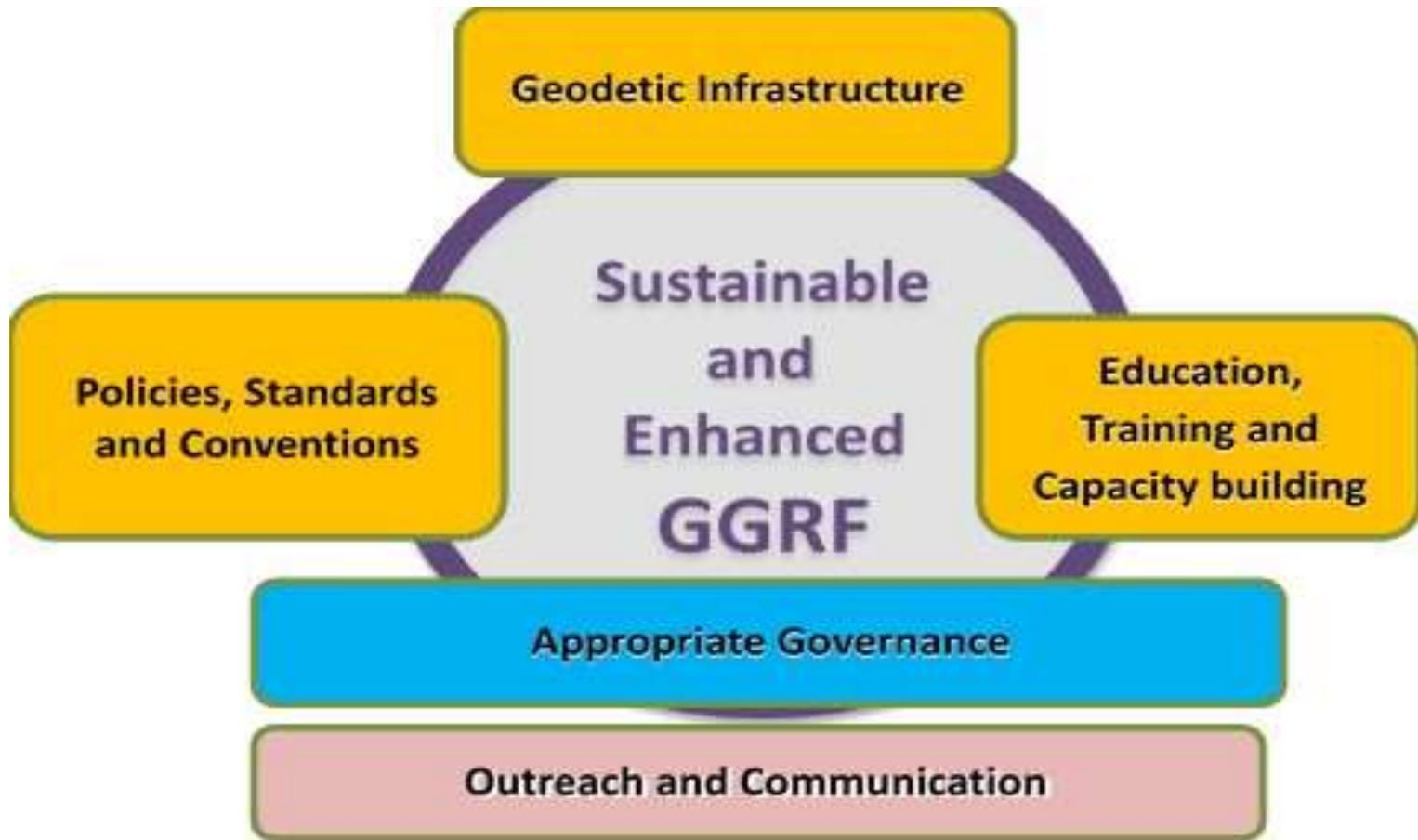
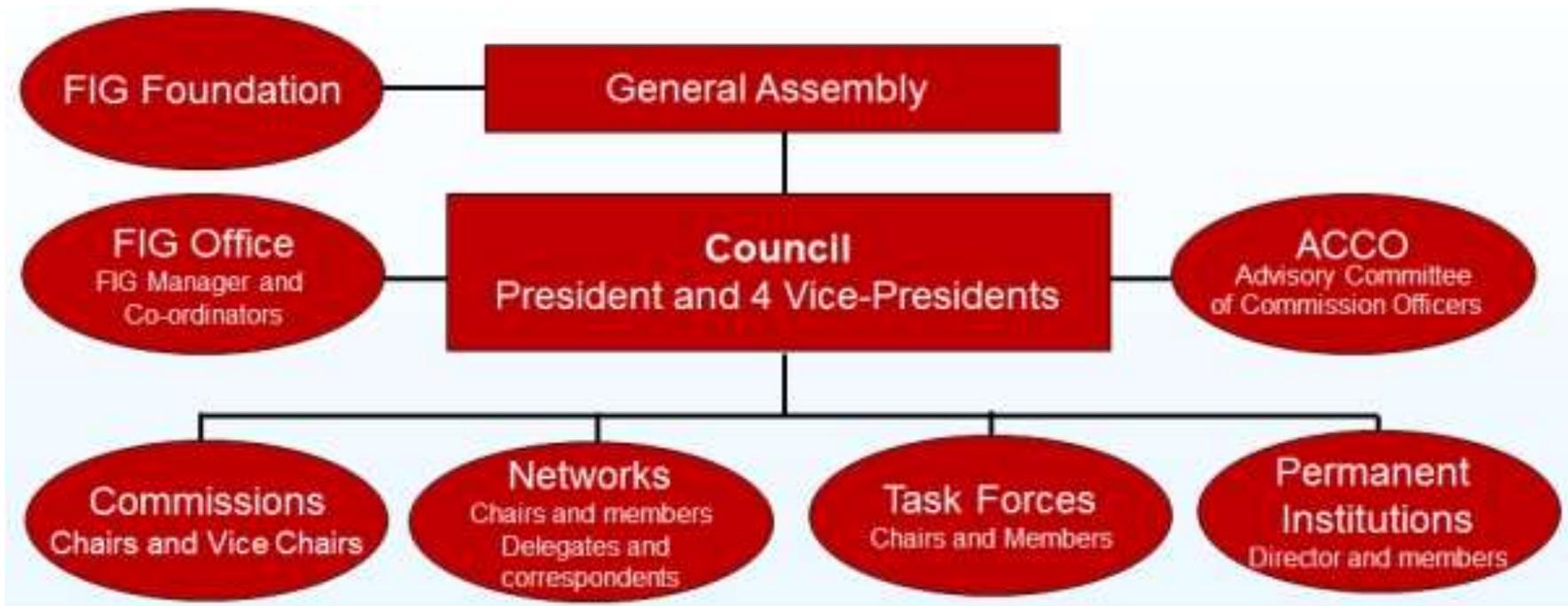


FIG in brief

- Fédération Internationale des Géomètres (FIG) was founded on July 18 1878 in Paris
- FIG has become anglicized to the International Federation of Surveyors
- UN-recognized non-government organization (NGO), representing over 120 countries
- Its aim is to ensure that the disciplines of surveying and all who practice them meet the needs of the markets and communities that they serve

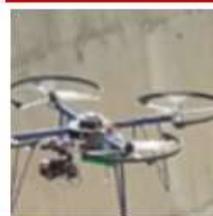
FIG Organization

<https://www.fig.net/>





Commission 1 – Professional Standards and Practice



Commission 6 – Engineering Surveys



Commission 2 – Professional Education



Commission 7 – Cadastre and Land Management



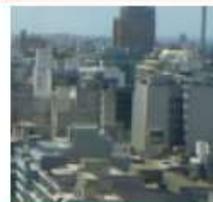
Commission 3 – Spatial Information Management



Commission 8 – Spatial Planning and Development



Commission 4 – Hydrography



Commission 9 – Valuation and the Management of Real Estate



Commission 5 – Positioning and Measurement

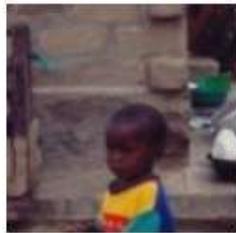


Commission 10 - Construction Economics and Management

Working Group Chairs

- 5.1 [Standards, Quality Assurance and Calibration](#)
David Martin, France
- 5.2 [3D Reference Frames](#)
Nic Donnelly, New Zealand
- 5.3 [Vertical Reference Frames](#)
David Avalos-Naranjo, Mexico
- 5.4 [GNSS](#)
Suelynn Choy, Australia
- 5.5 [Multi-Sensor-Systems](#)
Allison Kealy, Australia
- 5.6 [Cost Effective Positioning](#)
Leonid A. Lipatnikov, Russia

FIG Networks



**FIG Regional Capacity
Development Network**



FIG Young Surveyors Network

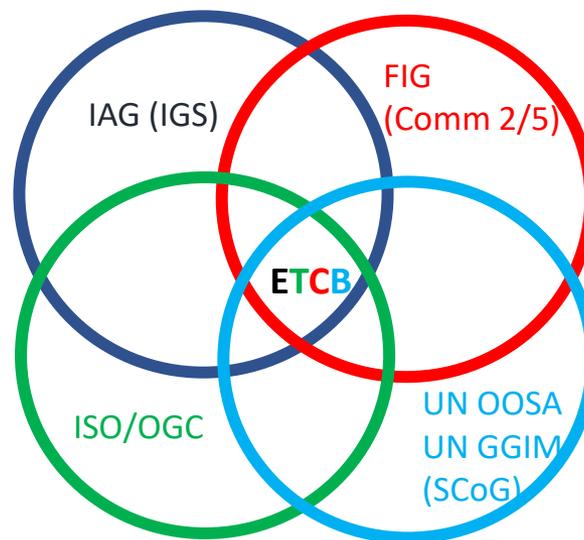


FIG Standard Network

- FIG Regional CDN
 - Asia-Pacific - Pacific Geospatial and Surveying Council
 - Africa - growing
 - Americas – Just getting started => SIRGAS WG II

Global Linkages

- IAG
 - Makes the reference frame
 - ITRF20/IGS20, IHRF
- ISO/OGC
 - Develop Standards
 - ISO 19161, ISOGR, etc.
- UN-OOSA/UN-GGIM/UN-SCoG
 - Governance & coordination
 - Including ETCB
- FIG
 - Trains, educates, builds capacity
- Surveyors
 - Must implement all of this – need ETCB
 - FIG is there to train and educate you





Questions?